

Daily News Decode

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Xoo Infection: Rice



- Scientists from the Centre for Plant Molecular Biology (CPMB) have uncovered the mechanism by which bacterium called Xoo causes disease in rice plants.
- *Xanthomonas oryzae* pv. *oryzae* (Xoo) causes a serious bacterial leaf blight disease in rice. It is also known as Bacterial blight.
- Xoo is a gram-negative bacteria.
- Xoo infection causes huge yield losses to rice cultivation throughout the world.
- Xoo infection initiates from the leaf sheath and eventually spreads to mature leaves through the water flow under optimum temperature and high humidity conditions (Vascular disease).
- Scientists are working to identify and develop a few molecules which are derived either from the Xoo bacterium or from the infected rice cell walls.
- Treatment of rice with cellulase, a cell wall degrading enzyme secreted by Xoo induces rice immune responses and protects rice from subsequent infections by Xoo.

Elon Musk's SpaceX creates new world record; launches 143 satellites on single rocket



- Elon Musk's SpaceX created a new world record by launching 143 satellites on a single rocket last night.
- SpaceX has beaten the Indian space agency ISRO's record of deploying 104 satellites in a single launch in February 2017. The launch vehicle for the SpaceX record-breaking flight was the Falcon 9 rocket.
- The 143 satellites launched last night include commercial and government CubeSats, microsats and 10 Starlink satellites
- Onboard was also a spacecraft belonging to Nasa
- With these satellites, SpaceX aims to provide near-global broadband internet coverage all over the world by 2021
- According to sources, SpaceX offered a very low price of 15,000 dollars per kilogram for each satellite to be delivered to a polar sun-synchronous orbit.

Sunderbans is home to 428 species of birds, says ZSI



- The Indian Sunderbans, which is part of the largest mangrove forest in the world, is home to 428 species of birds, a recent publication of the Zoological Survey of India (ZSI) states.
- The Indian Sunderbans, which covers 4,200 sq. km, also includes the Sunderban Tiger Reserve of 2,585 sq. km — home to about 96 royal Bengal tigers (as per the last census in 2020).
- It is a world heritage site and a Ramsar site (a wetland site designated to be of international importance).
- The publication has been compiled by three scientists — Kaliash Chandra, Director, ZSI, Gopinathan Maheshwaran, head of the bird section of the ZSI, and Amitava Majumdar.
- The area is home to nine out of 12 species of kingfishers found in the country as well rare species such as the Goliath heron and the spoon-billed sandpiper.

Mobile vans with nutrition for children in Noida



- Two mobile vans equipped with study and nutrition material for children in vulnerable situations were launched in Noida
- The vans—covered with bright artwork—were launched under “Nanhe Parinde”, a joint initiative by Gautam Budh Nagar Police and HCL Foundation, and implemented by NGO Chetna. Sanjay Gupta, director Chetna, said the vans would frequent parts of Noida with large concentrations of street children

Electronic version of voter card to be launched today



- The electronic version of the voter identity card, which can be downloaded on a mobile phone or a personal computer.
- The e-elector photo identity card is non-editable digital version of the elector photo identity card and it can be saved in facilities such as digital locker and can be printed in the PDF format
- The physical card takes time to print and reach the voter, and the idea is to provide faster delivery and easy accessibility to the document

Centre gives green light to underwater study to determine Ram Setu origins



- The govt has approved an under water research project to ascertain the origins of the Ram Setu — a 48-km-long chain of shoals between India and Sri Lanka
- Ram Setu, also known as Adam's Bridge or Nala Setu, holds religious significance because of the Ramayana.
- The proposal for this underwater exploration project
- The study — to be conducted by the Council for Scientific and Industrial Research (CSIR) and National Institute of Oceanography (NIO) Goa — will focus on the process behind Ram Setu's formation and also whether there are any submerged habitations around the structure.
- The agency's research vessel named Sindhu Sadhana will be deployed to collect samples of sediment from 35-40 metres below the water level. Sindhu Sadhana is an indigenous exploration vessel which can stay under water for up to 45 days.

Sethu samudram Shipping Canal Project

- Ram Setu has been at the centre of debate since 2005 when the UPA government proposed the Sethu samudram Shipping Canal Project, to build a shipping canal to link the Arabian Sea with the Bay of Bengal.
- For this, a channel passing through the limestone shoals of Ram Setu was to be dredged in the Sethusamudram sea, between Tamil Nadu and Sri Lanka.
- However, the project was opposed by environmental groups as well as by the BJP as they said that the project would damage the Ram Set

Ageing dams in India, US, other nations pose growing threat: UN report



- Over A thousand large dams in India will be roughly 50 years old in 2025 and such a ging structures across the world pose a growing threat, according to a UN report which notes that by 2050, most people on Earth will live downstream of tens of thousands of dams built in the 20th century.
- Ageing signs include increasing cases of dam failures, progressively increasing costs of dam repair and maintenance, increasing reservoir sedimentation, and loss of a dam's functionality and effectiveness, The analysis includes dam decommissioning or ageing case studies from the US, France, Canada, India, Japan, and Zambia and Zimbabwe

Arab Spring exiles look back 10 years after Egypt uprising



- The Egyptian who took to the streets on January 25, 2011, knew what they were doing
 - They knew they risked arrest and worse.
 - But as their numbers swelled in Cairo's central Tahrir Square, they tasted success.
 - Police forces backed off, and within days, former President Hosni Mubarak agreed to demands to step down.
- A decade later, thousands are estimated to have fled abroad to escape the government of President Abdel Fattah el-Sissi that is considered even more oppressive.
 - The significant loss of academics, artists, journalists and other intellectuals has, along with a climate of fear, hobbled any political opposition

The shipping sector is at sea (Written by R.N. Joe D'Cruz)

- Today, for instance, control of the seas is a key component of China's Belt and Road Initiative (BRI). China is trying to take control of the Bay of Bengal and the Indian Ocean Region.
- However, geographically, China is not as blessed as India. It has a great variety of climates and it has a coast only in the east
- yet, seven of the top 10 container ports in the world are in China, according to the World Shipping Council.
- What aided China's growth are strong merchant marine and infrastructure to carry and handle merchandise all over the world.
- Starting from the establishment of new ports in independent India to the establishment of the present-day Chabahar Port in Iran, all of India's actions on the shipping front have been counter-effective.
- This is due to a visionless administration.
- XIM trade with enormous hidden charges in the logistics cycle.
- Much of foreign currency is drained as transshipment and handling cost every day.
- In the port sector, instead of creating regional cargo-specific ports in peninsular India, the bureaucracy has repeatedly allowed similar infrastructural developments in multiple cargo-handling ports.
- As a result, Indian ports compete for the same cargo
- If we make our major ports cargo-specific, develop infrastructure on a par with global standards, and connect them with the hinterlands as well as international sea routes, they will automatically become transshipment hubs.

- Sagarmala, a government programme to enhance the performance of the country's logistics sector, provides hope. Its aims are port-led industrialisation, development of world-class logistics institutions, and coastal community development.
- With the call for 'Make in India' growing louder and with simultaneous multi-folded cargo growth in the country, we need ships to cater to domestic and international trade. Short sea and river voyages should be encouraged.
- Sagarmala should include coastal communities and consider evolving schemes to harness the century-old ship-owning spirit and sailing skills of peninsular India. Coastal communities should be made ship owners.
- The youth population is merely a number, not a skill-based strength. In the coastal region, their strength has not been tapped
- This is a point of concern and Sagarmala should concentrate on consolidating the strength of the coastal youth and make them contribute to the nation's economy with pride.

After the storm

- The RBI has proposed a significant shift in its regulatory approach towards India's non-banking financial companies (NBFCs), from a general approach of light touch regulation to one that monitors larger players almost as closely as it does banks.
- In absolute terms, their balance sheets have more than doubled, from ₹20.7-lakh crore in 2015 to ₹49.2-lakh crore in 2020.
- While this growth is a reflection of how lighter regulations have given them the flexibility to meet a range of financing needs, from home loans to micro-finance and large infrastructure projects, it also manifested into a systemic risk.
- And that risk was apparent when one of the largest infrastructure investment-focused NBFC players, IL&FS, unravelled in 2018, with its payment defaults catalysing a crisis for the entire sector.

In agri-credit, small farmers are still outside the fence



- To enable small farmers to diversify their crops or improve their income they must have access to credit at reasonable rates of interest.
- Agricultural credit has become less efficient in delivering agricultural growth.
- In the last 10 years, agriculture credit increased by 500% but has not reached even 20% of the 12.56 crore small and marginal farmers.
- Despite an increase in agri-credit, even today, 95% of tractors and other agri-implements sold in the country are being financed by non-banking financial companies, or NBFCs, at 18% rate of interest

- The share is 79% for households belonging to the highest size class of land possessed (above two hectares), beneficiaries of subsidised institutional credit at 4% to 7% rate of interest.
- As in the Agriculture Census, 2015-16, the total number of small and marginal farmers' households in the country stood at 12.56 crore.
- A loose definition of agri-credit has led to the leakage of loans at subsidised rates to large companies in agri-business.
- Though the RBI had set a cap that out of a bank's overall adjusted net bank credit, 18% must go to the agriculture sector, and within this, 8% must go to small and marginal farmers and 4.5% for indirect loans, bank advances routinely breach the limit.
- Subsidised credit should be the 'cause for viable agriculture but, unfortunately, the agriculture sector's performance has not been commensurate with the subsidised credit that it has received'.
- The way forward is to empower small and marginal farmers by 'giving them direct income support on a per hectare basis rather than hugely subsidising credit.
- Streamlining the agri-credit system to facilitate higher crop loans to farmer producer organisations, or the FPOs of small farmers
- With mobile phone penetration among agricultural households in India being as high as 89.1%, the prospects of aggressive effort to improve institutional credit delivery through technology-driven solutions can reduce the extent of the financial exclusion of agricultural households.

UAE approves establishment of embassy in Israel



- The United Arab Emirates (UAE) on Sunday approved the opening of an embassy in Israel's Tel Aviv, months after the countries agreed to normalise relations.
- The decision was reportedly taken during a meeting of the Council of Ministers of the UAE. This comes after Israel announced that its embassy in Abu Dhabi officially opened on Sunday.

Portugal President Marcelo Rebelo de Sousa wins second term



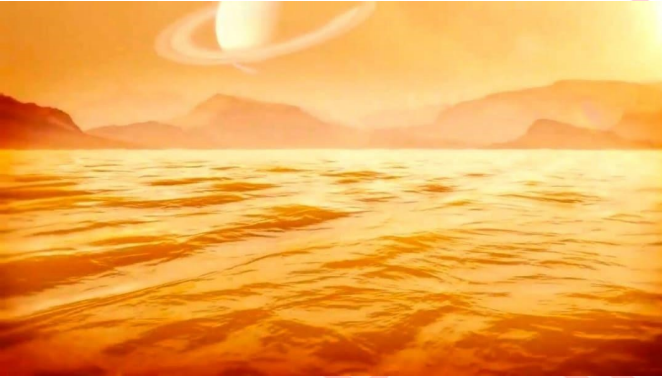
Portugal President Marcelo Rebelo de Sousa secured a second term on Sunday, winning the presidential election by around 61% of the votes. The elections were held even as Portugal has gone into a lockdown, and the voter turnout was reportedly lowest in the country's history. In his victory speech, de Sousa said that his priority now is fighting the pandemic.

UP becomes India's 1st state with 2 expressway airstrips for fighter planes



- With the completion of construction of a 3,300-metre-long airstrip near Kurebhar on Purvanchal Expressway,
- Uttar Pradesh has become the first state in India with two airstrips on expressways to facilitate emergency landing and take-off of fighter planes
- The IAF is likely to test the new airstrip soon, said a government official. The Lucknow-Agra Expressway in UP also has an airstrip.

Largest sea on Saturn's Titan over 1,000 ft deep, not 115 ft: Scientists



- Researchers have estimated that the largest sea on Saturn's moon Titan, Kraken Mare, is over 1,000 feet deep near its centre and not 115 feet, as previously estimated
- It contains about 80% of Titan's surface liquids, study lead author Valerio Poggiali of Cornell Center for Astrophysics and Planetary Science said
- The findings were based on NASA's Cassini mission's data.

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